



3rd edition Marcellus Shale Gas Environmental Summit
Environmental and operational implications of water use in shale gas extraction
Pittsburg, Pennsylvania, October 24 to 26, 2011
www.shalegasevent.com

PRE-CONFERENCE WORKSHOPS, 24 October 2011

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| 8:30 – 10:30 | Workshop A: Best Management Practices for water recycling |
| 10:40 – 12:40 | Workshop B: Solving the public relations dilemma: mitigating negative perceptions and educating the consumer |
| 12:45 – 2:45 | Workshop C: Best Management Practices in advanced hydraulic fracturing drilling techniques |
| 3:00 – 5:00 | Workshop D: Minimizing greenhouse gas emissions in the Marcellus play |



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MAIN CONFERENCE DAY 1, 25 October 2011

9:00 Chairman's Welcome

9:15 Opening Address: Federal regulations for environmental protection of the Marcellus shale play
Negative public opinions surrounding the industry are driving ever more stringent environmental regulation. This session will provide updates from federal agencies as to how they are now determining the future of shale gas extraction in the USA.

10:00 Keynote Address: Pennsylvania state legislature and regulation of liquids in the shale play
Updates on proposed legislation surrounding hydraulic fracturing, issuance of drilling permits, water management, and environmental compliance.

10:45 Networking & Coffee

11:30 Realities of the New York state drilling moratorium
An investigative look at the cumulative effects of operating hundreds of wells across the state, proposed guidelines for the issuance of drilling permits, and alternative extraction techniques still in effect during the moratorium.

12:15 Panel Discussion: State regulation in Appalachia
An interactive discussion amongst state officials and regulators offering a compare and contrast of drilling regulation, permitting procedures, and environmental compliance for the Marcellus play region. This session includes updates from West Virginia, New York, Maryland, and Ohio.

1:00 Lunch

2:15 Community Water Safety
How to engage local communities to better understand the infrastructural need of Appalachian development, landowner relations and prevention techniques for third party damage.

3:00 Alternatives to public water treatment: water recycling
It has become increasingly necessary for operators to wean themselves away from public water treatment facilities. This session discusses how best to incorporate water recycling into the operator's business model.

3:45 Networking & Coffee

4:15 Case study: Wastewater management
An investigative look at current and emerging treatment and disposal technologies and their practical application.

5:00 Close of Day 1



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MAIN CONFERENCE DAY 2, 26 October 2011

9:00 Water transmission systems

Where is the water coming from? This session offers practical insight into procedures that operators will need to have in place to maximize access to water supplies.

9:45 Stray gas and the risks of groundwater contamination

This session will evaluate the potential impacts associated with gas-well drilling and fracturing on groundwater and discuss the outcome of recent studies on methane migration.

10:30 Networking & Coffee

11:15 Assessing the best mix for hydraulic fracturing fluids

The behavior of spike compounds and others diluents used in fracturing fluid matrices and how to minimize the risks of volatile components.

12:00 pm Lunch

1:00 Wet gas separation

Optimizing the performance of technologies for the separation of gas and water into different streams, electrostatic precipitation, and the use of emulsion-breaking chemicals.

1:45 Value-added services for local community outreach

A critical look at new ways to incorporate environmental stewardship into daily operations and apply effective conservation techniques to restore depleted natural resources. This session will discuss how local partnerships can enhance active sites and promote safe water management.

2:30 Prevention and clean-up: techniques in accident remediation

A series of 2 presentations will provide a critical look at how to minimize contamination and implement efficient remediation procedures following a natural gas operational incident.

3:45 Networking & Coffee

4:15 Long term planning for shale gas extraction

This session provides an in-depth look at strategies for planning in a heavily regulated climate and value-added services for natural gas including local uses for shale gas extraction and the role of natural gas in powering the national grid.

5:00 Close of Day 2